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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shubhra Venna

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EXAMINER

TSE, YOUNG TOI

ART UNIT

PAPER NUMBER

2611

NOTIFICATION DATE

DELIVERY MODE

04/22/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/743,690	Applicant(s) VENNA ET AL.	
	Examiner YOUNG T. TSE	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20080127</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 12-14, filed on January 21, 2008, with respect to the rejection under 35 U.S.C. 112, first paragraph have been fully considered and are persuasive. The rejection of claims 1-20 has been withdrawn.

Drawings

2. The drawings were received on January 21, 2008. These drawings are acceptable. However, in Figures 3 and 6, "M-BIT" and "K-BIT" should be "M-BITS" for consistency and "K-BITS", and "K-" should be "K-BITS". Further, in Figure 3, the word "channel" should be deleted. In Figure 5, "FORWARD PULSE" should be "FORWARD PULSE GENERATOR" and the numbers located in the horizontal and vertical exits are illegible. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1-20 are objected to because of the following informalities:

In claim 1, line 2, "providing" should be "for providing"; lines 3 and 4-5, "digital data input source" should be "digital bits/samples"; line 6, "a received encoded signal" should be "an encoded signal from the encoder"; lines 7-8, "received encoded" should be deleted; line 13, the hyphen "-" between "high" and "rates" is not in the middle; and line 17, "a transmission channel" should be "the data transmission link".

In claim 2, line 2, the hyphen "-" between "mono" and "shot" is not in the middle.

In claim 4, line 2, "analog to digital converter" should be "an analog to digital converter".

In claim 5, line 2, "decoder adapts an received encoded signal between the" should be "encoder adapts the modulated data bits/samples between". See claim 16.

In claim 6, line 2, "decode" should be "encoder".

In claim 7, lines 2-3, "into a desired digital output" should be "to recover the data bits/samples".

In claim 8, line 2, the hyphen "-" between "high" and "rates" is not in the middle; lines 6-7, "encoding forward and conjugate pulse positions over a transmission channel" should be "forward and conjugate encoding pulse positions of the plurality of data nits/samples"; line 8, "pulse positions" should be "encoded pulse positions over the data transmission link"; line 12, "into digital output;" should be "to recover the input digital data bits/samples,,"; line 14, "separating" should be "separately encoding"; lines 15-16, "transmission channel" should be "data transmission link"; line 17, "a thin pulse is used" should be "the encoding uses a think pulse"; and line 18, "is used" should be deleted.

In claim 9, line 3, "and the" should be "and the relatively".

In claim 10, lines 2-3, the hyphen "-" between "mono" and "shot" is not in the middle.

In claim 11, lines 1-2, "in a data transmission link" should be "for transmitting mass quantities of digital data through a data transmission link of high-rates of speed"; line 3, "providing" should be "for providing"; line 8, "signal;" should be "from the encoder through the data transmission link; and"; line 10, "signal; and" should be "signal,,"; delete lines 11 and 12; line 14, "mass quantities" should be "the mass quantities"; line 15, "at" should be "at the" and the hyphen "-" between "high" and "rates" is not in the middle; line 18, "digital data input source" should be "data bits/samples"; and line 19, "transmission channel" should be "data transmission link".

In claim 13, line 2, the hyphen "-" between "mono" and "shot" is not in the middle.

In claim 14, line 2, "data splitter" should be "modulator".

In claim 15, line 1, "claim 11" should be "claim 14"; line 2, "data bits/samples" should be "plurality of data bit/sample sets"; line 3, "separating the data bits/samples" should be "separately encoding the plurality of data bit/sample sets"; and line 4, "the transmission channel" should be "the data transmission link".

In claim 19, line 1, "the system" should be deleted.

In claim 20, lines 1-3, "the system further comprising: a data splitter for splitting" should be "wherein the modulator splits the data bits/samples."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8-10, 12, 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, lines 9-10, the term "the forward and conjugate pulses in a signal" is indefinite because it is unclear what is "the signal" related to and the phrase "the forward and conjugate pulses" lacks antecedent basis.

In claim 8 (lines 11-12), claim 16 (line 3) and claim 18 (line 2), the terms "the data", "the forward and conjugate pulses" and "the forward and conjugate pulse positions" also lack antecedent basis.

Claims 12, 13 and 18 lack connection or cooperation with the precedent claim 11.

Further, the claimed subject matter of claim 12 appears recited in claim 17.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3-9, 11-12 and 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Richardson et al., US Publication No. 2003/0035187 A1, herein after “Richardson”.

Regarding claims 1, 3, 5, 7-8, 11, 14-18 and 20, a transmitter comprises a modulator for modulating data bits/samples and an encoder for encoding the modulated data bits/sample to a transmitting circuit for transmitting the encoded data bits/samples a decoder and a demodulator of a receiver through a transmission channel are well known in the art as shown in Figure 7(a) of Richardson’s transmission system. Wherein the modulator separates the modulated signals into the forward pulse position C2 and the conjugate pulse position 1* of the encoders over the transmission channel to the decoder and demodulator of the receiver. See paragraphs [0089] and [0090].

Regarding claims 4 and 19, although Richardson does not explicitly show, suggest or teach that an analog to digital converter is used for converting an analog signal into the data bits/samples, is not inherent and well known to an skilled artisan that when a communication system is a digital communication system and the incoming signal is an analog signal, an analog to digital converter is needed to convert the analog signal into digital signal or samples prior the operation of a digital communication because a digital communication system operates in digital signals only.

Regarding claims 6, 8, 9, 12 and 17, as shown in Richardson's waveforms of Figure 7(b), the waveform C1 appears thicker than the waveform of C2.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 2, 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable Richardson as applied to claims 1, 8 and 11, respectively in view of Burnsweig et al., U.S. Patent No. 4,206,316, hereinafter "Burnsweig".

Richardson fails to show, suggest or teach that the forward and conjugate pulse positions are generated by a mono-shot pulse generator as recited in claims 2, 10 and 13.

Burnsweig also relates to a communication system shown in Figure 1 comprising a transmitter circuit 10 and a receiver circuit 15. Figure 2 shows a diagram of the pulse position modulated encoder 12 of the transmitter circuit 10 of Figure 1. Figure 5 shows a diagram of the pulse position modulator 21 of the pulse position modulated encoder 12 of Figure 2 which comprises pulse with monostable multivibrators 41 and pulse position monostable multivibrators 42 which clearly generate mono-shot pulses or positions. See col. 6, line 49 to col. 7, line 61.

Therefore, it would have been obvious to one of ordinary skill in the art to use mono-shot pulse generator(s) in Richardson's encoder in order generate mono-shop pulses or positions with the modulated signals prior the transmission of the encoded signals to the receiver as taught by Burnsweig.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is 571- 272-3051. The examiner can normally be reached on Monday-Friday 10:00-6:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on 571- 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YOUNG T. TSE/
Primary Examiner, Art Unit 2611